

What is an eco-house?

An Eco-house is an environmentally low-impact home designed and built using materials and technology that reduces its carbon footprint and lowers its energy needs.





Solar panels

No greenhouse gas emissions are released into the atmosphere when you use solar panels to create electricity. And because the sun provides more energy than we'll ever need, electricity from solar power is a very important energy source in the move to clean energy production.

7 Reasons Why You Should Use Solar Power

Take Advantage of the Solar Power Benefits

People often ask themselves '**Why is solar energy good?**' and, as a result, fail to realise the importance of solar technology. Solar power has evidently become the trend in renewable energy. Homeowners around

the UK installed solar panels on their roof, managing accordingly to reap all the solar energy advantages.

Apart from the obvious financial benefits, there are other pertinent reasons why you should convert to using solar power instead of fossil fuels.

What other reasons should you consider when going solar? Here are seven compelling reasons.

1. Solar Power Is Good for the Environment

The most commonly known fact about solar energy is that it represents a clean, green source of energy. Solar power is a great way to reduce your carbon footprint. There's nothing about solar power that pollutes mother nature. Solar power doesn't release any greenhouse gasses, and except for needing a source of clean water to function, it uses absolutely no other resources. Hence, it's safe and environmentally-friendly. Yet, people are still in doubt why solar energy is good.

Solar power is self-sufficient and installing solar panels on your roof is a safe and easy path to contribute to a sustainable future. Starting on your home is a great way to show you care about the environment.

2. Solar Electricity Makes Your Home Go Off-the-Grid

The decrease in the cost of solar panels serves as a great example of why there should be an increase in the use of solar energy. Traditional electricity relies heavily on fossil fuels such as coal and natural gas. Not only are they bad for the environment, but they are also limited resources. This translates into a volatile market, in which energy prices alter throughout the day.

Solar electricity boosts your electricity independence! By investing in a 4kW solar system, which is the most common domestic size, you can easily protect yourself against unpredictable increases in utility prices, and enjoy cheap electricity throughout the entire day - the sun will never increase its rates and it gives you energy security.

Once you have solar panels up on your roof, you've technically reached an energy-independent status. Solar battery storage systems can also help store electricity for night-time and rainy days.

3. Solar Power Can Use Underutilised Land

You may continue to wonder why solar power. With the increasing need of solar energy, it's become easily accessible to most of us. Across countries, there are vast land that are far away from big cities or capitals, and are not used for anything at all.

With solar power, we can actually make use of the land and subsequently generate great value; solar energy provides a source of power for everyone. In this way, we don't need to use high priced land that might be better suited for other applications.

You might have heard of solar farms - panels used to harvest solar energy in large numbers. This highlights perfectly how solar power makes use of underutilised land. For instance, a 45 acre solar farm has been recently built in the UK, and it's able to power 2,500 homes.

4. Solar Power Causes Less Electricity Loss

Electricity needs to be transported from big power plants to end-consumers via extensive networks. Long distance transmissions equal power losses. Ever wondered what are solar panels used for? They're on your roof to get energy from the sun. Rooftop solar power is helpful in increasing electricity efficiency, considering the short distance. Your energy becomes domestic and as a result you're in control of your own bills and energy usage. Furthermore, solar power systems are durable, thus chances of service interruption are reduced.

5. Solar Power Improves Grid Security

When there are many of us switching to solar power, we are less likely to experience blackouts or brownouts. Every household in the UK that have solar cells installed, functions as a small power plant. This, in turn, provides us with a greater electricity grid security, especially in terms of natural or human-caused disasters.

With the help of solar panel grants, you can also be paid to export electricity back to the grid

6. Solar Power Creates Jobs and Economic Growth in the UK

Our national economy can be helped by solar power. The more people who opt for solar, the more needs will be for companies to install solar panels. This creates additional jobs for skilled workers, and consequently keeps the economy growing.

In 2015, for instance, the UK became the second-largest solar employer, with 35,000 people, and the continent's largest solar photovoltaic (PV) panel installation market.

7. Solar Power Is A Free Source of Energy

The sun provides us with more energy than we could ever use, and no one can monopolise the sunlight. Your solar power system will start saving money from the moment it's turned on, however, the advantages of solar power are best visible in the long-term. The longer you have your solar power system, the more you enjoy the benefits of solar technology and support the environment.

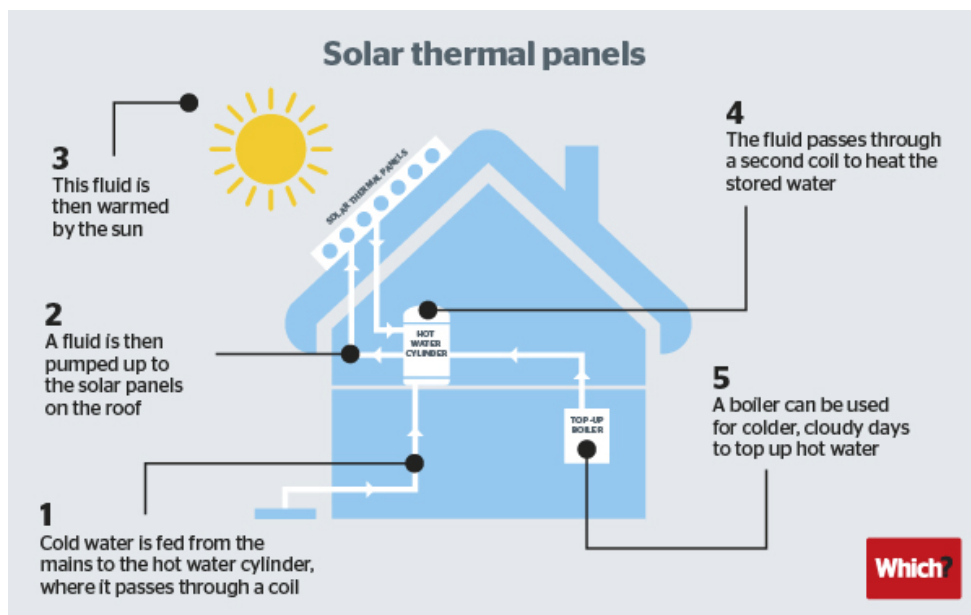
Aside from solar electricity, solar energy has a second application. We often associate solar energy with electricity, which is acquired through PV panels, but it's also possible to use the energy generated by the sun for heating purposes. This process is accomplished by deploying solar thermal systems that simply convert the sunlight into heating solutions.

Solar thermal panels

A solar water heating system uses solar thermal panels on your roof to heat water to use around your home. Fitting this type of water heating system isn't cheap so, before you invest, you need to find out whether solar thermal panels are right for your home and your needs. Our expert advice will tell you how the system works, what you need to consider, and help make sure you get a good price from a reputable installer.

How does solar water heating work?

Solar thermal panels use heat from the sun to warm fluid passing through them, as the diagram below shows. This is then used to heat your water, which is stored in a hot water cylinder. An immersion heater/unvented hot water cylinder might be needed as a back-up heater or to get the water to the temperature you want.



Types of solar thermal panels

There are two main types of solar water heating panels – **flat plate** and **evacuated tubes** (referring to the way the water interacts with the panel). Evacuated tubes look like a bank of glass tubes fitted to your roof. Flat plate systems can either be fitted onto the roof or integrated into it. Evacuated tube systems are more efficient than flat-plate versions, so are often smaller but still generate the same amount of hot water. There are also drainback systems, which drain water from inside the solar panel when the pump is switched off. This prevents water from freezing or boiling inside the solar panel.

Solar PV vs Solar Thermal

Solar PV Panels vs. Solar Water Heating. ... While both technologies use sunlight to create energy, they achieve very different results: solar photovoltaic panels turn sunlight into electricity, while a solar water heating system uses the heat from sunlight to heat your property's water supply.



What is a wind turbine?

Wind turbines harness the power of the wind and use it to generate electricity.

How do wind turbines work?

Wind turbines use large blades to catch the wind. When the wind blows, the blades are forced round, driving a turbine which generates electricity. The stronger the wind, the more electricity produced.

There are two types of domestic-sized wind turbine:

- Pole mounted: these are free standing and are erected in a suitably exposed position, with generation capacity of about 5 to 6 Kilowatt (kW).
- Building mounted: these are smaller than mast mounted systems and can be installed on the roof of a home where there is a suitable wind resource. Often these are around 1kW to 2kW in size



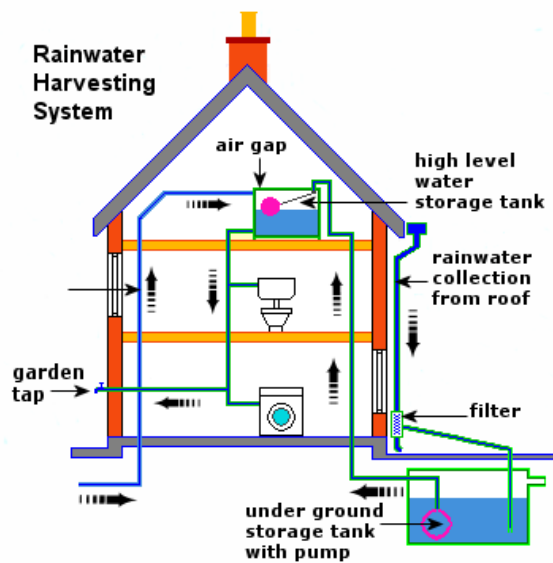
Water wheel generator

A medium size water wheel electric generator can provide enough electricity for one house (3 bulbs, one TV and one radio all running at the same time). ... **Unlike solar panels, a water wheel electric generator can produce electricity 24/7. Hydroelectricity is the world's largest and cleanest source of renewable energy**



Rainwater harvesting

Rainwater harvesting is the collection, storage and distribution of recycled rainwater, for use in various residential or commercial environments. Rainwater Harvesting Systems come in different forms.



This is just a few examples of what some Eco-houses have.

It would be great if everyone had at least one Eco-home aspect, it would make the planet a better, much cleaner place. Climate change is a big problem right now, if we all had Eco-Friendly homes it would help reduce the carbon dioxide in the air.

